115

## SEQUENCE LISTING

<110> INCYTE PHARMACEUTICALS, INC. BANDMAN, Olga TANG, Y. Tom CORLEY, Neil C. AZIMZAI, Yalda BAUGHN, Mariah R. <120> HUMAN SCAD-RELATED MOLECULES, SCRM-1 AND SCRM-2 <130> PF-0559 USN <140> 09/743,752 <141> Herewith <150> PCT/US9916164 <151> 1999-07-16 <150> US 09/116,750 <151> 1998-07-16 <150> US 60/160,074 <151> 1998-07-16 <160> 6 <170> FastSEQ for Windows Version 3.0 <210> 1 <211> 278 <212> PRT <213> HOMO SAPIENS <220> <221> misc\_feature <223> Incyte Clone No: 1240869 <400> 1 Met His Met Ala Arg Leu Leu Gly Leu Cys Ala Trp Ala Arg Lys Ser 10 Val Arg Met Ala Ser Ser Arg Met Thr Arg Arg Asp Pro Leu Thr Asn 25 Lys Val Ala Leu Val Thr Ala Ser Thr Asp Gly Ile Gly Phe Ala Ile 40 45 Ala Arg Arg Leu Ala Gln Asp Arg Ala His Val Val Ser Ser Arg 55 Lys Gln Gln Asn Val Asp Gln Ala Val Ala Thr Leu Gln Gly Glu Gly 70 Leu Ser Val Thr Gly Thr Val Cys His Val Gly Lys Ala Glu Asp Arg 90 Glu Arg Leu Val Ala Thr Ala Val Lys Leu His Gly Gly Ile Asp Ile 100 105 Leu Val Ser Asn Ala Ala Val Asn Pro Phe Phe Gly Ser Ile Met Asp

125

120

Val Thr Glu Glu Val Trp Asp Lys Thr Leu Asp Ile Asn Val Lys Ala 135 Pro Ala Leu Met Thr Lys Ala Val Pro Glu Met Glu Lys Arg Gly 150 155 Gly Ser Val Val Ile Val Ser Ser Ile Ala Ala Phe Ser Pro Ser 165 170 Pro Gly Phe Ser Pro Tyr Asn Val Ser Lys Thr Ala Leu Leu Gly Leu 185 Asn Asn Thr Leu Ala Ile Glu Leu Ala Pro Arg Asn Ile Arg Val Asn 200 Cys Leu Ala Pro Gly Leu Ile Lys Thr Ser Phe Ser Arg Met Leu Trp 215 220 Met Asp Lys Glu Lys Glu Glu Ser Met Lys Glu Thr Leu Arg Ile Arg 230 235 Arg Leu Gly Glu Pro Glu Asp Cys Ala Gly Ile Val Ser Phe Leu Cys 250 Ser Glu Asp Ala Ser Tyr Ile Thr Gly Glu Thr Val Val Val Gly Gly 260 265 Gly Thr Pro Ser Arg Leu 275

<210> 2

<211> 564

<212> PRT

<213> HOMO SAPIENS

<220>

<221> misc\_feature

<223> Incyte Clone No: 2060002

<400> 2

Met Ser Tyr Pro Ala Asp Asp Tyr Glu Ser Glu Ala Ala Tyr Asp Pro Tyr Ala Tyr Pro Ser Asp Tyr Asp Met His Thr Gly Asp Pro Lys Gln 25 Asp Leu Ala Tyr Glu Arg Gln Tyr Glu Gln Gln Thr Tyr Gln Val Ile 40 Pro Glu Val Ile Lys Asn Phe Ile Gln Tyr Phe His Lys Thr Val Ser Asp Leu Ile Asp Gln Lys Val Tyr Glu Leu Gln Ala Ser Arg Val Ser 70 75 Ser Asp Val Ile Asp Gln Lys Val Tyr Glu Ile Gln Asp Ile Tyr Glu 90 Asn Ser Trp Thr Lys Leu Thr Glu Arg Phe Phe Lys Asn Thr Pro Trp 100 105 Pro Glu Ala Glu Ala Ile Ala Pro Gln Val Gly Asn Asp Ala Val Phe 120 125 Leu Ile Leu Tyr Lys Glu Leu Tyr Tyr Arg His Ile Tyr Ala Lys Val 135 Ser Gly Gly Pro Ser Leu Glu Gln Arg Phe Glu Ser Tyr Tyr Asn Tyr Cys Asn Leu Phe Asn Tyr Ile Leu Asn Ala Asp Gly Pro Ala Pro Leu 165 170 Glu Leu Pro Asn Gln Trp Leu Trp Asp Ile Ile Asp Glu Phe Ile Tyr 185 Gln Phe Gln Ser Phe Ser Gln Tyr Arg Cys Lys Thr Ala Lys Lys Ser 195 200

Glu Glu Glu Ile Asp Phe Leu Arg Ser Asn Pro Lys Ile Trp Asn Val His Ser Val Leu Asn Val Leu His Ser Leu Val Asp Lys Ser Asn Ile 230 235 Asn Arg Gln Leu Glu Val Tyr Thr Ser Gly Gly Asp Pro Glu Ser Val 250 245 Ala Gly Glu Tyr Gly Arg His Ser Leu Tyr Lys Met Leu Gly Tyr Phe 265 260 Ser Leu Val Gly Leu Leu Arg Leu His Ser Leu Leu Gly Asp Tyr Tyr 280 Gln Ala Ile Lys Val Leu Glu Asn Ile Glu Leu Asn Lys Lys Ser Met 295 Tyr Ser Arg Val Pro Glu Cys Gln Val Thr Thr Tyr Tyr Tyr Val Gly 310 315 Phe Ala Tyr Leu Met Met Arg Arg Tyr Gln Asp Ala Ile Arg Val Phe 330 325 Ala Asn Ile Leu Leu Tyr Ile Gln Arg Thr Lys Ser Met Phe Gln Arg 345 Thr Thr Tyr Lys Tyr Glu Met Ile Asn Lys Gln Asn Glu Gln Met His 365 360 Ala Leu Leu Ala Ile Ala Leu Thr Met Tyr Pro Met Arg Ile Asp Glu 375 Ser Ile His Leu Gln Leu Arg Glu Lys Tyr Gly Asp Lys Met Leu Arg 390 395 Met Gln Lys Gly Asp Pro Gln Val Tyr Glu Glu Leu Phe Ser Tyr Ser 410 405 Cys Pro Lys Phe Leu Ser Pro Val Val Pro Asn Tyr Asp Asn Val His 425 Pro Asn Tyr His Lys Glu Pro Phe Leu Gln Gln Leu Lys Val Phe Ser 440 Asp Glu Val Gln Gln Gln Ala Gln Leu Ser Thr Ile Arg Ser Phe Leu 460 455 Lys Leu Tyr Thr Thr Met Pro Val Ala Lys Leu Ala Gly Phe Leu Asp 475 470 Leu Thr Glu Gln Glu Phe Arg Ile Gln Leu Leu Val Phe Lys His Lys 490 485 Met Lys Asn Leu Val Trp Thr Ser Gly Ile Ser Ala Leu Asp Gly Glu 500 505 Phe Gln Ser Ala Ser Glu Val Asp Phe Tyr Ile Asp Lys Asp Met Ile 520 His Ile Ala Asp Thr Lys Val Ala Arg Arg Tyr Gly Asp Phe Phe Ile 535 540 Arg Gln Ile His Lys Phe Glu Glu Leu Asn Arg Thr Leu Lys Lys Met 550 555 Gly Gln Arg Pro

<210> 3

<211> 1280

<212> DNA

<213> HOMO SAPIENS

<220>

<221> misc\_feature

<223> Incyte Clone No: 1240869

| .400- 3   |   |   |   |  |  |   |
|---|---|---|---|--|--|---|
| <400> 3   | cagacttgct  | gatataataa  | atacacataa  | ccaggetget   | aggetetat  | 60  |
|   | ggaagtcggt  |   |   |  |  | 120   |
|   | tggccctggt  |   |   |  |  | 180   |
|   | aggacagggc  |   |   |  |  | 240   |
|   | ccacgctgca  |   |   |  |  | 300   |
|   |   |   |   |  |  | 360   |
|   | aggaccggga  |   |   |  |  | 420   |
|   | tctccaatgc  |   |   |  |  | 480   |
|   | gggacaagac  |   |   |  |  | 540   |
|   | cagaaatgga  |   |   |  |  | 600   |
|   | gtccatctcc  |   |   |  |  | 660   |
|   | ataccctggc  |   |   |  |  | 720   |
|   | ttatcaagac  |   |   |  |  | 720   |
|   | aagaaaccct  |   |   |  |  | 840   |
|   | tcctgtgctc  |   |   |  |  | 900   |
|   | cccgtcccg   |   |   |  |  | 960   |
|   | tggtgctgtt  |   |   |  |  | 1020  |
|   | ctcatcaaat  |   |   |  |  | 1020  |
|   | cttactcggg  |   |   |  |  | 1140  |
|   | gacaggcctg  |   |   |  |  |   |
|   | ccactgggga  |   |   |  |  | 1200  |
|   | gcaaattaac  | aacttgcaaa  | tgaggtgcaa  | ataaaatgca   | gatgattgcg   | 1260<br>1280  |
| cggctttgaa  | aaaaaaaaa   |   |   |  |  | 1280  |
| -210> 4   |   |   |   |  |  |   |
| <210> 4   |   |   |   |  | ,  |   |
| <211> 1894  |   |   |   |  |  |   |
| <212> DNA   | O A DI ENIG   |   |   |  |  |   |
| <213> HOMO :  | SAPIENS   |   |   |  |  |   |
|   |   |   |   |  |  |   |
| <220>   |   |   |   |  |  |   |
| <220>   | feature   |   |   |  |  |   |
| <221> misc_:  |   | 2060002   |   |  |  |   |
|   |   | 2060002   |   |  |  |   |
| <221> misc_:  |   | 2060002   |   |  | •  |   |
| <221> misc_:<br><223> Incyto  |   |   | gctgatgatt  | atgagtctga   | ggcggcttat   | 60  |
| <221> misc_:<br><223> Incyto<br><400> 4<br>ctcgcaagcg   | e Clone No:   | gtcttatccc  |   |  |  | 60<br>120   |
| <221> misc_:<br><223> Incyton<br><400> 4<br>ctcgcaagcg<br>gacccctacg  | e Clone No: aggcagccat  | gtcttatccc<br>cgactatgat  | atgcacacag  | gagatccaaa   | gcaggacctt   |   |
| <221> misc_: <223> Incyte <400> 4  ctcgcaagcg  gacccctacg  gcttatgaac   | aggcagccat  | gtcttatccc<br>cgactatgat<br>acagcaaacc  | atgcacacag<br>tatcaggtga  | gagatccaaa<br>tccctgaggt   | gcaggacctt<br>gatcaaaaac   | 120   |
| <221> misc_: <223> Incyte <400> 4  ctcgcaagcg  gacccctacg  gcttatgaac  ttcatccagt   | aggcagccat<br>cttatcccag<br>gtcagtatga<br>atttccacaa  | gtcttatccc<br>cgactatgat<br>acagcaaacc<br>aactgtctca  | atgcacacag<br>tatcaggtga<br>gatttgattg  | gagatccaaa<br>tccctgaggt<br>accagaaagt   | gcaggacctt<br>gatcaaaaac<br>gtatgagcta   | 120<br>180  |
| <221> misc_: <223> Incyto <400> 4  ctcgcaagcg  gacccctacg  gcttatgaac  ttcatccagt  caggccagtc   | aggcagccat<br>cttatcccag<br>gtcagtatga<br>atttccacaa<br>gtgtctccag  | gtcttatccc<br>cgactatgat<br>acagcaaacc<br>aactgtctca<br>tgatgtcatt  | atgcacacag<br>tatcaggtga<br>gatttgattg<br>gaccagaagg  | gagatccaaa<br>tccctgaggt<br>accagaaagt<br>tgtatgagat   | gcaggacctt<br>gatcaaaaac<br>gtatgagcta<br>ccaggacatc   | 120<br>180<br>240   |
| <221> misc_: <223> Incyto <400> 4  ctcgcaagcg  gacccctacg  gcttatgaac  ttcatccagt  caggccagtc  tatgagaaca   | aggcagccat<br>cttatcccag<br>gtcagtatga<br>atttccacaa  | gtcttatccc<br>cgactatgat<br>acagcaaacc<br>aactgtctca<br>tgatgtcatt<br>gctgactgaa  | atgcacacag<br>tatcaggtga<br>gatttgattg<br>gaccagaagg<br>agattcttca  | gagatccaaa<br>tccctgaggt<br>accagaaagt<br>tgtatgagat<br>agaatacacc   | gcaggacctt<br>gatcaaaaac<br>gtatgagcta<br>ccaggacatc<br>ttggcccgag   | 120<br>180<br>240<br>300  |
| <221> misc_: <223> Incyto <400> 4   ctcgcaagcg   gacccctacg   gcttatgaac   ttcatccagt   caggccagtc   tatgagaaca   gctgaagcca  | aggcagccat<br>cttatcccag<br>gtcagtatga<br>atttccacaa<br>gtgtctccag<br>gctggaccaa<br>ttgctccaca  | gtcttatccc<br>cgactatgat<br>acagcaaacc<br>aactgtctca<br>tgatgtcatt<br>gctgactgaa<br>ggttggcaat  | atgcacacag<br>tatcaggtga<br>gatttgattg<br>gaccagaagg<br>agattcttca<br>gatgctgtct  | gagatccaaa<br>tccctgaggt<br>accagaaagt<br>tgtatgagat<br>agaatacacc<br>tcctgatttt   | gcaggacctt<br>gatcaaaaac<br>gtatgagcta<br>ccaggacatc<br>ttggcccgag<br>atacaaagaa   | 120<br>180<br>240<br>300<br>360   |
| <221> misc_: <223> Incyte <400> 4   ctcgcaagcg   gacccctacg   gcttatgaac   ttcatccagt   caggccagtc   tatgagaaca   gctgaagcca   ttatactaca   | aggcagccat<br>cttatcccag<br>gtcagtatga<br>atttccacaa<br>gtgtctccag<br>gctggaccaa  | gtcttatccc<br>cgactatgat<br>acagcaaacc<br>aactgtctca<br>tgatgtcatt<br>gctgactgaa<br>ggttggcaat<br>tgccaaagtc  | atgcacacag<br>tatcaggtga<br>gatttgattg<br>gaccagaagg<br>agattcttca<br>gatgctgtct<br>agtgggggac  | gagatccaaa<br>tccctgaggt<br>accagaaagt<br>tgtatgagat<br>agaatacacc<br>tcctgatttt<br>cttccttgga   | gcaggacctt<br>gatcaaaaac<br>gtatgagcta<br>ccaggacatc<br>ttggcccgag<br>atacaaagaa<br>gcagaggttt   | 120<br>180<br>240<br>300<br>360<br>420  |
| <221> misc_: <223> Incyte <400> 4   ctcgcaagcg   gacccctacg   gcttatgaac   ttcatccagt   caggccagtc   tatgagaaca   gctgaagcca   ttatactaca   gaatcctatt  | aggcagccat<br>cttatcccag<br>gtcagtatga<br>atttccacaa<br>gtgtctccag<br>gctggaccaa<br>ttgctccaca  | gtcttatccc<br>cgactatgat<br>acagcaaacc<br>aactgtctca<br>tgatgtcatt<br>gctgactgaa<br>ggttggcaat<br>tgccaaagtc<br>caatctcttc  | atgcacacag<br>tatcaggtga<br>gatttgattg<br>gaccagaagg<br>agattcttca<br>gatgctgtct<br>agtgggggac<br>aactacattc  | gagatccaaa<br>tccctgaggt<br>accagaaagt<br>tgtatgagat<br>agaatacacc<br>tcctgatttt<br>cttccttgga<br>ttaatgccga   | gcaggacctt<br>gatcaaaaac<br>gtatgagcta<br>ccaggacatc<br>ttggcccgag<br>atacaaagaa<br>gcagaggttt<br>tggtcctgct   | 120<br>180<br>240<br>300<br>360<br>420<br>480   |
| <221> misc_: <223> Incyte <400> 4   ctcgcaagcg   gacccctacg   gcttatgaac   ttcatccagt   caggccagtc   tatgagaaca   gctgaagcca   ttatactaca   gaatcctatt   ccccttgaac   | aggcagccat<br>cttatcccag<br>gtcagtatga<br>atttccacaa<br>gtgtctccag<br>gctggaccaa<br>ttgctccaca<br>ggcacatata<br>acaactactg  | gtcttatccc<br>cgactatgat<br>acagcaaacc<br>aactgtctca<br>tgatgtcatt<br>gctgactgaa<br>ggttggcaat<br>tgccaaagtc<br>caatctcttc<br>gtggctctgg  | atgcacacag<br>tatcaggtga<br>gatttgattg<br>gaccagaagg<br>agattcttca<br>gatgctgtct<br>agtgggggac<br>aactacattc<br>gatattatcg  | gagatccaaa<br>tccctgaggt<br>accagaaagt<br>tgtatgagat<br>agaatacacc<br>tcctgattt<br>cttccttgga<br>ttaatgccga<br>atgagttcat  | gcaggacctt gatcaaaaac gtatgagcta ccaggacatc ttggcccgag atacaaagaa gcagaggttt tggtcctgct ctaccagttt   | 120<br>180<br>240<br>300<br>360<br>420<br>480<br>540  |
| <221> misc_: <223> Incyte <400> 4   ctcgcaagcg   gacccctacg   gcttatgaac   ttcatccagt   caggccagtc   tatgagaaca   gctgaagcca   ttatactaca   gaatcctatt   ccccttgaac   cagtcattca  | aggcagccat<br>cttatcccag<br>gtcagtatga<br>atttccacaa<br>gtgtctccag<br>gctggaccaa<br>ttgctccaca<br>ggcacatata<br>acaactactg<br>tacccaacca<br>gtcagtaccg  | gtcttatccc<br>cgactatgat<br>acagcaaacc<br>aactgtctca<br>tgatgtcatt<br>gctgactgaa<br>ggttggcaat<br>tgccaaagtc<br>caatctcttc<br>gtggctctgg<br>ctgtaagact  | atgcacacag<br>tatcaggtga<br>gatttgattg<br>gaccagaagg<br>agattcttca<br>gatgctgtct<br>agtgggggac<br>aactacattc<br>gatattatcg<br>gccaagaagt  | gagatccaaa<br>tccctgaggt<br>accagaaagt<br>tgtatgagat<br>agaatacacc<br>tcctgatttt<br>cttccttgga<br>ttaatgccga<br>atgagttcat<br>cagaggagga   | gcaggacctt gatcaaaaac gtatgagcta ccaggacatc ttggcccgag atacaaagaa gcagaggttt tggtcctgct ctaccagttt gattgacttt  | 120<br>180<br>240<br>300<br>360<br>420<br>480<br>540  |
| <221> misc_: <223> Incyte <400> 4   ctcgcaagcg   gacccctacg   gcttatgaac   ttcatccagt   caggccagtc   tatgagaaca   gctgaagcca   ttatactaca   gaatcctatt   ccccttgaac   cagtcattca   cttcgttcca   | aggcagccat<br>cttatcccag<br>gtcagtatga<br>atttccacaa<br>gtgtctccag<br>gctggaccaa<br>ttgctccaca<br>ggcacatata<br>acaactactg<br>tacccaacca<br>gtcagtaccg<br>atcccaaaat  | gtcttatccc<br>cgactatgat<br>acagcaaacc<br>aactgtctca<br>tgatgtcatt<br>gctgactgaa<br>ggttggcaat<br>tgccaaagtc<br>caatctcttc<br>gtggctctgg<br>ctgtaagact<br>ctggaatgtt  | atgcacacag<br>tatcaggtga<br>gatttgattg<br>gaccagaagg<br>agattcttca<br>gatgctgtct<br>agtgggggac<br>aactacattc<br>gatattatcg<br>gccaagaagt<br>catagtgtcc  | gagatccaaa<br>tccctgaggt<br>accagaaagt<br>tgtatgagat<br>agaatacacc<br>tcctgatttt<br>cttccttgga<br>ttaatgccga<br>atgagttcat<br>cagaggagga<br>tcaatgtcct   | gcaggacctt<br>gatcaaaaac<br>gtatgagcta<br>ccaggacatc<br>ttggcccgag<br>atacaaagaa<br>gcagaggttt<br>tggtcctgct<br>ctaccagttt<br>gattgacttt<br>tcattccctg   | 120<br>180<br>240<br>300<br>360<br>420<br>480<br>540<br>600<br>660  |
| <221> misc_: <223> Incyte <400> 4   ctcgcaagcg   gacccctacg   gcttatgaac   ttcatccagt   caggccagtc   tatgagaaca   gctgaagcca   ttatactaca   gaatcctatt   ccccttgaac   cagtcattca   cttcgttcca   gtagacaaat  | aggcagccat<br>cttatcccag<br>gtcagtatga<br>atttccacaa<br>gtgtctccag<br>gctggaccaa<br>ttgctccaca<br>ggcacatata<br>acaactactg<br>tacccaacca<br>gtcagtaccg  | gtcttatccc<br>cgactatgat<br>acagcaaacc<br>aactgtctca<br>tgatgtcatt<br>gctgactgaa<br>ggttggcaat<br>tgccaaagtc<br>caatctcttc<br>gtggctctgg<br>ctgtaagact<br>ctggaatgtt<br>ccgacagttg  | atgcacacag<br>tatcaggtga<br>gatttgattg<br>gaccagaagg<br>agattcttca<br>gatgctgtct<br>agtgggggac<br>aactacattc<br>gatattatcg<br>gccaagaagt<br>catagtgtcc<br>gaggtataca  | gagatccaaa<br>tccctgaggt<br>accagaaagt<br>tgtatgagat<br>agaatacacc<br>tcctgatttt<br>cttccttgga<br>ttaatgccga<br>atgagttcat<br>cagaggagga<br>tcaatgtcct<br>caagcggagg   | gcaggacctt gatcaaaaac gtatgagcta ccaggacatc ttggcccgag atacaaagaa gcagaggttt tggtcctgct ctaccagttt gattgacttt tcattccctg tgaccctgag  | 120<br>180<br>240<br>300<br>360<br>420<br>480<br>540<br>600<br>660<br>720   |
| <221> misc_: <223> Incyto <400> 4   ctcgcaagcg   gacccctacg   gcttatgaac   ttcatccagt   caggccagtc   tatgagaaca   gctgaagcca   ttatactaca   gaatcctatt   ccccttgaac   cagtcattca   cttcgttcca   gtagacaaat   agtgtggctg   | aggcagccat cttatcccag gtcagtatga atttccacaa gtgtctccag gctggaccaa ttgctccaca ggcacatata acaactactg tacccaacca gtcagtaccg atcccaaaat ccaacatcaa  | gtcttatccc<br>cgactatgat<br>acagcaaacc<br>aactgtctca<br>tgatgtcatt<br>gctgactgaa<br>ggttggcaat<br>tgccaaagtc<br>caatctcttc<br>gtggctctgg<br>ctgtaagact<br>ctggaatgtt<br>ccgacagttg<br>gcggcactcc  | atgcacacag<br>tatcaggtga<br>gatttgattg<br>gaccagaagg<br>agattcttca<br>gatgctgtct<br>agtgggggac<br>aactacattc<br>gatattatcg<br>gccaagaagt<br>catagtgtcc<br>gaggtataca<br>ctctacaaaa  | gagatccaaa<br>tccctgaggt<br>accagaaagt<br>tgtatgagat<br>agaatacacc<br>tcctgatttt<br>cttccttgga<br>ttaatgccga<br>atgagttcat<br>cagaggagga<br>tcaatgtcct<br>caagcggagg<br>tgcttggtta   | gcaggacctt gatcaaaaac gtatgagcta ccaggacatc ttggcccgag atacaaagaa gcagaggttt tggtcctgct ctaccagttt gattgacttt tcattccctg tgaccctgag cttcagcctg   | 120<br>180<br>240<br>300<br>360<br>420<br>480<br>540<br>600<br>660<br>720<br>780  |
| <221> misc_: <223> Incyto <400> 4   ctcgcaagcg   gacccctacg   gcttatgaac   ttcatccagt   caggccagtc   tatgagaaca   gctgaagcca   ttatactaca   gaatcctatt   ccccttgaac   cagtcattca   cttcgttcca   gtagacaaat   agtgtggctg   gtcgggcttc  | aggcagccat cttatcccag gtcagtatga atttccacaa gtgtctccag gctggaccaa ttgctccaca ggcacatata acaactactg tacccaacca gtcagtaccg atcccaaaat ccaacatcaa gggagtatgg   | gtcttatccc<br>cgactatgat<br>acagcaaacc<br>aactgtctca<br>tgatgtcatt<br>gctgactgaa<br>ggttggcaat<br>tgccaaagtc<br>caatctcttc<br>gtggctctgg<br>ctgtaagact<br>ctggaatgtt<br>ccgacagttg<br>gcggcactcc<br>ctccctgtta  | atgcacacag<br>tatcaggtga<br>gatttgattg<br>gaccagaagg<br>agattcttca<br>gatgctgtct<br>agtgggggac<br>aactacattc<br>gatattatcg<br>gccaagaagt<br>catagtgtcc<br>gaggtataca<br>ctctacaaaa<br>ggagattact  | gagatccaaa<br>tccctgaggt<br>accagaaagt<br>tgtatgagat<br>agaatacacc<br>tcctgatttt<br>cttccttgga<br>ttaatgccga<br>atgagttcat<br>cagaggagga<br>tcaatgtcct<br>caagcggagg<br>tgcttggtta<br>accaggccat                                     | gcaggacctt gatcaaaaac gtatgagcta ccaggacatc ttggcccgag atacaaagaa gcagaggttt tggtcctgct ctaccagttt gattgacttt tcattccctg tgaccctgag cttcagcctg caaggtgctg  | 120<br>180<br>240<br>300<br>360<br>420<br>480<br>540<br>600<br>660<br>720<br>780<br>840   |
| <221> misc_: <223> Incyto <400> 4   ctcgcaageg   gacccctacg   gcttatgaac   ttcatccagt   caggccagtc   tatgagaaca   gctgaagcca   ttatactaca   gaatcctatt   ccccttgaac   cagtcattca   cttcgttcca   gtagacaaat   agtgtggctt   gagaacatcg  | aggcagccat cttatcccag gtcagtatga atttccacaa gtgtctccag gctggaccaa ttgctccaca ggcacatata acaactactg tacccaacca gtcagtaccg atcccaacat gcagtaccg atcccaacat ccaacatcaa gggagtatgg tccgcctgca aactgaacaa                                    | gtcttatccc<br>cgactatgat<br>acagcaaacc<br>aactgtctca<br>tgatgtcatt<br>gctgactgaa<br>ggttggcaat<br>tgccaaagtc<br>caatctcttc<br>gtggctctgg<br>ctgtaagact<br>ctggaatgtt<br>ccgacagttg<br>gcggcactcc<br>ctccctgtta<br>gaagagtatg  | atgcacacag<br>tatcaggtga<br>gatttgattg<br>gaccagaagg<br>agattcttca<br>gatgctgtct<br>agtgggggac<br>aactacattc<br>gatattatcg<br>gccaagaagt<br>catagtgtcc<br>gaggtataca<br>ctctacaaaa<br>ggagattact<br>tattccgtg   | gagatccaaa tccctgaggt accagaaagt tgtatgagat agaatacacc tcctgattt cttccttgga ttaatgccga atgagtcat cagaggagga tcaatgtcct caagcggagg tgcttggtta accaggcat tgccagagtg  | gcaggacctt gatcaaaaac gtatgagcta ccaggacatc ttggcccgag atacaaagaa gcagaggttt tggtcctgct ctaccagttt gattgacttt tcattccctg tgaccctgag cttcagcctg caaggtgctg ccaggtcacc   | 120<br>180<br>240<br>300<br>360<br>420<br>480<br>540<br>600<br>660<br>720<br>780<br>840<br>900  |
| <221> misc_: <223> Incyto <400> 4   ctcgcaagcg   gacccctacg   gcttatgaac   ttcatccagt   caggcagtc   tatgagaaca   gctgaagcca   ttatactaca   gaatcctatt   ccccttgaac   cagtcattca   cttcgttcca   gtagacaaat   agtgtggctg   gtcgggcttc   gagaacatcg   acatactatt   | aggcagccat cttatcccag gtcagtatga atttccacaa gtgtctccag gctggaccaa ttgctccaca ggcacatata acaactactg tacccaacca gtcagtaccg atcccaacaa gtcagtaccg atcccaacaa ccaacatcaa gggagtatgg tccgcctgca aactgaacaa atgttgggtt                        | gtcttatccc<br>cgactatgat<br>acagcaaacc<br>aactgtctca<br>tgatgtcatt<br>gctgactgaa<br>ggttggcaat<br>tgccaaagtc<br>caatctcttc<br>gtggctctgg<br>ctgtaagact<br>ctggaatgtt<br>ccgacagttg<br>gcggcactcc<br>ctccctgtta<br>gaagagtatg<br>tgcatattg   | atgcacacag<br>tatcaggtga<br>gatttgattg<br>gaccagaagg<br>agattcttca<br>gatgctgtct<br>agtgggggac<br>aactacattc<br>gatattatcg<br>gccaagaagt<br>catagtgtcc<br>gaggtataca<br>ctctacaaaa<br>ggagattact<br>tattcccgtg<br>atgatgcgtc  | gagatccaaa tccctgaggt accagaaagt tgtatgagat agaatacacc tcctgattt cttccttgga ttaatgccga atgagtcat cagaggagga tcaatgtcct caagcggagg tgcttggtta accaggccat tgccagagg gttaccagg  | gcaggacctt gatcaaaaac gtatgagcta ccaggacatc ttggcccgag atacaaagaa gcagaggttt tggtcctgct ctaccagttt gattgacttt tcattccctg tgaccctgag cttcagcctg caaggtgctg ccaggtcacc tgccatccgg  | 120<br>180<br>240<br>300<br>360<br>420<br>480<br>540<br>600<br>660<br>720<br>780<br>840<br>900<br>960   |
| <221> misc_: <223> Incyto <400> 4   ctcgcaagcg   gacccctacg   gcttatgaac   ttcatccagt   caggccagtc   tatgagaaca   gctgaagcca   ttatactaca   gaatcctatt   cccttgaac   cagtcattca   cttcgttcca   gtagacaaat   agtgtggctg   gtcgggcttc   gagaacatcg   acatactatt   gtcttcgca   | aggcagccat cttatcccag gtcagtatga atttccacaa gtgtctccag gctggaccaa ttgctccaca ggcacatata acaactactg tacccaacca gtcagtaccg atcccaacat gcagtaccg atcccaacat ccaacatcaa gggagtatgg tccgcctgca aactgaacaa                                    | gtcttatccc<br>cgactatgat<br>acagcaaacc<br>aactgtctca<br>tgatgtcatt<br>gctgactgaa<br>ggttggcaat<br>tgccaaagtc<br>caatctcttc<br>gtggctctgg<br>ctgtaagact<br>ctggaatgtt<br>ccgacagttg<br>gcggcactcc<br>ctccctgtta<br>gaagagtatg<br>tgcatatttg<br>ctacatccag  | atgcacacag<br>tatcaggtga<br>gatttgattg<br>gaccagaagg<br>agattcttca<br>gatgctgtct<br>agtgggggac<br>aactacattc<br>gatattatcg<br>gccaagaagt<br>catagtgtcc<br>gaggtataca<br>ctctacaaaa<br>ggagattact<br>tattcccgtg<br>atgatgcgtc  | gagatccaaa tccctgaggt accagaaagt tgtatgagat agaatacacc tcctgattt cttccttgga ttaatgccga atgagtcat cagaggagga tcaatgtcct caagcggagg tgcttggtta accaggccat tgccagagg gttaccaggagg gcatgttca   | gcaggacctt gatcaaaaac gtatgagcta ccaggacatc ttggcccgag atacaaagaa gcagaggttt tggtcctgct ctaccagttt gattgacttt tcattccctg tgaccctgag cttcagcctg caaggtgctg ccaggtcacc tgccatccgg  | 120<br>180<br>240<br>300<br>360<br>420<br>480<br>540<br>600<br>660<br>720<br>780<br>840<br>900<br>960<br>1020                                 |
| <221> misc_: <223> Incyte <400> 4   ctcgcaagcg   gacccctacg   gcttatgaac   ttcatccagt   caggccagtc   tatgagaaca   gctgaagcca   ttatactaca   gaatcctatt   ccccttgaac   cagtcattca   cttcgttcca   gtagacaaat   agtgtggctt   gagaacatcg   acatactatt   gtcttcgcca   tacaagtatg   | aggcagccat cttatcccag gtcagtatga atttccacaa gtgtctccag gctggaccaa ttgctccaca ggcacatata acaactactg tacccaacca gtcagtaccg atcccaacaa gtgagtatgg tccgcctgca aactgaacaa atgttgggtt acatcctct   | gtcttatccc<br>cgactatgat<br>acagcaaacc<br>aactgtctca<br>tgatgtcatt<br>gctgactgaa<br>ggttggcaat<br>tgccaaagtc<br>caatctcttc<br>gtggctctgg<br>ctgtaagact<br>ctggaatgtt<br>ccgacagttg<br>gcggcactcc<br>ctcctgtta<br>gaagagtatg<br>tgcatatttg<br>ctacatccag<br>ctacatccag   | atgcacacag<br>tatcaggtga<br>gatttgattg<br>gaccagaagg<br>agattcttca<br>gatgctgtct<br>agtgggggac<br>aactacattc<br>gatattatcg<br>gccaagaagt<br>catagtgtcc<br>gaggtataca<br>ctctacaaaa<br>ggagattact<br>tattcccgtg<br>atgatgcgtc<br>aggaccaaga<br>gagcagatgc  | gagatccaaa tccctgaggt accagaaagt tgtatgagat agaatacacc tcctgattt cttccttgga ttaatgccga atgaggtcat caagggagg tcaatgtcct caagcggagg tgcttggtta accaggccat tgccagagtg gttaccagga gcatgttcca atgcgtgct                                   | gcaggacctt gatcaaaaac gtatgagcta ccaggacatc ttggcccgag atacaaagaa gcagaggttt tggtcctgct ctaccagttt gattgacttt tcattccctg tgaccctgag cttcagcctg caaggtgctg ccaggtcacc tgccatccgg gaggaccacg   | 120<br>180<br>240<br>300<br>360<br>420<br>480<br>540<br>600<br>660<br>720<br>780<br>840<br>900<br>960<br>1020<br>1080                         |
| <221> misc_: <223> Incyto <400> 4   ctcgcaagcg   gacccctacg   gcttatgaac   ttcatccagt   caggccagtc   tatgagaaca   gctgaagcca   ttatactaca   gaatcctatt   ccccttgaac   cagtcattca   cttcgttcca   gtagacaaat   agtgtggctg   gtcgggcttc   gagaacatcg   acatactatt   gtcttcgca   tacaagtatg   ctcacgatgt                | aggcagccat cttatcccag gtcagtatga atttccacaa gtgtctccaca gctggaccaa ttgctccaca ggcacatata acaactactg tacccaacca gtcagtaccg atcccaaaat ccaacatcaa gggagtatgg tccgcctgca aactgaacaa atgttgggtt acatcctcct agatgattaa accccatgcg            | gtcttatccc<br>cgactatgat<br>acagcaaacc<br>aactgtctca<br>tgatgtcatt<br>gctgactgaa<br>ggttggcaat<br>tgccaaagtc<br>caatctcttc<br>gtggctctgg<br>ctgtaagact<br>ctggaatgtt<br>ccgacagttg<br>gcggcactcc<br>ctcctgtta<br>gaagagtatg<br>tgcatatttg<br>ctacatccag<br>ctacatccag<br>ctacatccag<br>ctacatccag   | atgcacacag<br>tatcaggtga<br>gatttgattg<br>gaccagaagg<br>agattcttca<br>gatgctgtct<br>agtgggggac<br>aactacattc<br>gatattatcg<br>gccaagaagt<br>catagtgtcc<br>gaggtataca<br>ctctacaaaa<br>ggagattact<br>tattcccgtg<br>atgatgcgtc<br>aggaccaaga<br>gagcagatgc<br>agcattcacc                            | gagatccaaa tccctgaggt accagaaagt tgtatgagat agaatacacc tcctgattt cttccttgga ttaatgccga atgagttcat cagaggagga tcaatgtcct caagcggagg tgcttggtta accaggccat tgccagagtg gttaccagga gcatgttcca atgcgttgct tccagctgct                      | gcaggacctt gatcaaaaac gtatgagcta ccaggacatc ttggcccgag atacaaagaa gcagaggttt tggtcctgct ctaccagttt gattgacttt tcattcctg tgaccctgag cttcagcctg caaggtgctg ccaggtcacc tgccatccgg gaggaccacg ggccattgcc ggagaaaatat                     | 120<br>180<br>240<br>300<br>360<br>420<br>480<br>540<br>600<br>660<br>720<br>780<br>840<br>900<br>960<br>1020<br>1080<br>1140                 |
| <221> misc_: <223> Incyto <400> 4   ctcgcaagcg   gacccctacg   gcttatgaac   ttcatccagt   caggccagtc   tatgagaaca   gctgaagcca   ttatactaca   gaatcctatt   ccccttgaac   cagtcattca   cttcgttcca   gtagacaaat   agtgtggctg   gtcgggcttc   gagaacatcg   acatactatt   gtcttcgcca   tacaagtatg   ctggggcagaga             | aggcagccat cttatcccag gtcagtatga atttccacaa gtgtctccaca gctggaccaa ttgctccaca ggcacatata acaactactg tacccaacca gtcagtaccg atcccaaaat ccaacatcaa gggagtatgg tccgcctgca aactgaacaa atgttgggtt acatcctcct agatgattaa                       | gtcttatccc<br>cgactatgat<br>acagcaaacc<br>aactgtctca<br>tgatgtcatt<br>gctgactgaa<br>ggttggcaat<br>tgccaaagtc<br>caatctcttc<br>gtggctctgg<br>ctgtaagact<br>ctggaatgtt<br>ccgacagttg<br>gcggcactcc<br>ctcctgtta<br>gaagagtatg<br>tgcatatttg<br>ctacatccag<br>ctacatccag<br>caagcagaat<br>tatcgatgag<br>gcagaaaggt   | atgcacacag<br>tatcaggtga<br>gatttgattg<br>gaccagaagg<br>agattctca<br>gatgctgtct<br>agtgggggac<br>aactacattc<br>gatattatcg<br>gccaagaagt<br>catagtgtcc<br>gaggtataca<br>ctctacaaaa<br>ggagattact<br>tattcccgtg<br>atgatgcgtc<br>aggaccaaga<br>gagcagatgc<br>agcattcacc<br>gacccacaag               | gagatccaaa tccctgaggt accagaaagt tgtatgagat agaatacacc tcctgattt cttccttgga ttaatgccga atgagttcat cagaggagga tcaatgtcct caagcggagg tgcttggtta accaggccat tgccagagtg gttaccagga gcatgtcca atgcgctgct tccagctgcg tctatgaaga            | gcaggacctt gatcaaaaac gtatgagcta ccaggacatc ttggcccgag atacaaagaa gcagaggttt tggtcctgct ctaccagttt gattgacttt tcattccctg tgaccctgag cttcagcctg caaggtgctg ccaggtcacc tgccatccgg gaggaccacg ggccattgcc ggagaaatat acttttcagt          | 120<br>180<br>240<br>300<br>360<br>420<br>480<br>540<br>600<br>660<br>720<br>780<br>840<br>900<br>960<br>1020<br>1080<br>1140<br>1200         |
| <221> misc_: <223> Incyto <400> 4   ctcgcaagcg   gacccctacg   gcttatgaac   ttcatccagt   caggccagtc   tatgagaaca   gctgaagcca   ttatactaca   gaatcctatt   ccccttgaac   cagtcattca   cttcgttcca   gtagacaaat   agtgtggctg   gtcgggcttc   gagaacatcg   acatactatt   gtcttcgcca   tacaagtatg   ctgggacaaga   tactcctgcc | aggcagccat cttatcccag gtcagtatga atttccacaa gtgtctccaca gctggaccaa ttgctccaca ggcacatata acaactactg tacccaacca gtcagtaccg atcccaaaat ccaacatcaa gggagtatgg tccgcctgca aactgaacaa atgttgggtt acatcctcct agatgattaa accccatgcg tgttgcgcat | gtcttatccc<br>cgactatgat<br>acagcaaacc<br>aactgtctca<br>tgatgtcatt<br>gctgactgaa<br>ggttggcaat<br>tgccaaagtc<br>caatctcttc<br>gtggctctgg<br>ctgtaagact<br>ctggaatgtt<br>ccgacagttg<br>gcggcactcc<br>ctcctgtta<br>gaagagtatg<br>tgcatatttg<br>ctacatccag<br>ctacatccag<br>ctacatccag<br>caagcagaat<br>tatcgatgag<br>gcagaaaggt<br>gcagaaaggt<br>gtcgcctgta | atgcacacag<br>tatcaggtga<br>gatttgattg<br>gaccagaagg<br>agattctca<br>gatgctgtct<br>agtgggggac<br>aactacattc<br>gatattatcg<br>gccaagaagt<br>catagtgtcc<br>gaggtataca<br>ctctacaaaa<br>ggagattact<br>tattcccgtg<br>atgatgcgtc<br>aggaccaaga<br>gagcagatgc<br>agcattcacc<br>gacccacaag<br>gtgcccaact | gagatccaaa tccctgaggt accagaaagt tgtatgagat agaatacacc tcctgattt cttccttgga ttaatgccga atgagttcat cagaggagga tcaatgtcct caagcggagg tgcttggtta accaggccat tgccagagtg gttaccagga gcatgtcca atgcgctgct tccagctgcg tctatgaaga atgataatgt | gcaggacctt gatcaaaaac gtatgagcta ccaggacatc ttggcccgag atacaaagaa gcagaggttt tggtcctgct ctaccagttt gattgacttt tcattccctg tgaccctgag cttcagcctg caaggtgctg ccaggtcacc tgccatccgg gagaacacg ggccattgcc ggagaaatat acttttcagt gcacccaac | 120<br>180<br>240<br>300<br>360<br>420<br>480<br>540<br>600<br>660<br>720<br>780<br>840<br>900<br>960<br>1020<br>1080<br>1140<br>1200<br>1260 |

```
gcccagcttt caaccatccg cagcttcctg aagctctaca ccaccatgcc tgtggccaag
ctggctggct tcctggacct cacagagcag gagttccgga tccagcttct tgtcttcaaa
cacaagatga agaacctcgt gtggaccagc ggtatctcag ccctggatgg tgaatttcag
 tcagcctcag aggttgactt ctacattgat aaggacatga tccacatcgc ggacaccaag
 gtcgccaggc gttatgggga tttcttcatc cgtcagatcc acaaatttga ggagcttaat
 cgaaccctga agaagatggg acagagacct tgatgatatt cacacacatt caggaacctg
 ttttgatgta ttataggcag gaagtgtttt tgctaccgtg aaacctttac ctagatcagc
 catcagcctg tcaactcagt taacaagtta aggaccgaag tgtttcaagt ggatctcagt
 aaaggatctt tggagccaga aaaaaaaaaa aaaa
<210> 5
<211> 280
<212> PRT
<213> HOMO SAPIENS
<220>
<221> misc_feature
<223> GENBANK ID: g1079566
<400> 5
Met Leu Ser Ala Val Ala Arg Gly Tyr Gln Gly Trp Phe His Pro Cys
                                     10
 Ala Arg Leu Ser Val Arg Met Ser Ser Thr Gly Ile Asp Arg Lys Gly
                                 25
 Val Leu Ala Asn Arg Val Ala Val Val Thr Gly Ser Thr Ser Gly Ile
                             40
 Gly Phe Ala Ile Ala Arg Arg Leu Ala Arg Asp Gly Ala His Val Val
                         55
 Ile Ser Ser Arg Lys Gln Gln Asn Val Asp Arg Ala Met Ala Lys Leu
                     70
                                         75
 Gln Gly Glu Gly Leu Ser Val Ala Gly Ile Val Cys His Val Gly Lys
                                     90
                 85
 Ala Glu Asp Arg Glu Gln Leu Val Ala Lys Ala Leu Glu His Cys Gly
 Gly Val Asp Phe Leu Val Cys Ser Ala Gly Val Asn Pro Leu Val Gly
                             120
 Ser Thr Leu Gly Thr Ser Glu Gln Ile Trp Asp Lys Ile Leu Ser Val
                                             140
                         135
 Asn Val Lys Ser Pro Ala Leu Leu Ser Gln Leu Leu Pro Tyr Met
                     150
                                         155
 Glu Asn Arg Arg Gly Ala Val Ile Leu Val Ser Ser Ile Ala Ala Tyr
                                     170
 Asn Pro Val Val Ala Leu Gly Val Tyr Asn Val Ser Lys Thr Ala Leu
             180
                                 185
 Leu Gly Leu Thr Arg Thr Leu Ala Leu Glu Leu Ala Pro Lys Asp Ile
                             200
 Arg Val Asn Cys Val Val Pro Gly Ile Ile Lys Thr Asp Phe Ser Lys
                         215
 Val Phe His Gly Asn Glu Ser Leu Trp Lys Asn Phe Lys Glu His His
                                         235
                     230
 Gln Leu Gln Arg Ile Gly Glu Ser Glu Asp Cys Ala Gly Ile Val Ser
                                     250
                 245
 Phe Leu Cys Ser Pro Asp Ala Ser Tyr Val Asn Gly Glu Asn Ile Ala
                                                      270
                                 265
 Val Ala Gly Tyr Ser Thr Arg Leu
```

1440

1500

1560

1620

1680

1740

1800

1860 1894

280

275

```
<210> 6
<211> 938
<212> PRT
<213> CAENORHABDITIS ELEGANS
<220>
<221> misc_feature
<223> GENBANK ID: g2731377
<400> 6
 Met Ser Arg Arg Val Glu Phe Asp Leu Ser Thr Glu Asp His Ser Asp
 Arg Arg Arg Thr Asn Thr Phe Ser Ser Asp Glu Asp Gly Val Pro Asn
 Glu Val Ala Asp Tyr Leu Val Tyr Phe Ser Arg Met Val Asp Glu Gln
                             40
 Asn Val Pro Glu Ile Leu Thr Leu Tyr Asp Gln Ala Phe Pro Asp Leu
                         55
 Thr Glu Arg Phe Phe Arg Asp Arg Met Trp Pro Asp Glu Asn Val Val
 Glu Arg Ile Ile Gly Pro Gly Asn Lys Leu Phe Ile Ile Leu Tyr Lys
                 85
                                     90
 Glu Leu Tyr Tyr Arg Gln Leu Tyr Ala Arg Asn Thr Arg Gly Pro Leu
                                 105
 Leu Val His Arg Tyr Glu Ser Phe Met Asn Tyr Gln Glu Leu Phe Ser
                             120
 Glu Leu Leu Ser Ser Lys Asp Pro Ile Pro Leu Ser Leu Pro Asn Val
                         135
                                             140
 Trp Leu Trp Asp Ile Ile Asp Glu Phe Val Tyr Gln Phe Gln Ala Phe
                     150
                                         155
 Cys Leu Tyr Lys Ala Asn Pro Gly Lys Arg Asn Ala Asp Glu Val Glu
                 165
                                     170
 Asp Leu Ile Asn Ile Glu Glu Asn Gln Asn Ala Trp Asn Ile Tyr Pro
            180
                                 185
 Val Leu Asn Ile Leu Tyr Ser Leu Leu Ser Lys Ser Gln Ile Val Glu
                             200
 Gln Leu Lys Ala Leu Lys Glu Lys Arg Asn Pro Asp Ser Val Ala Asp
                                             220
                         215
 Glu Phe Gly Gln Ser Asp Leu Tyr Phe Lys Leu Gly Tyr Phe Ala Leu
                     230
                                         235
 Ile Gly Leu Leu Arg Thr His Val Leu Leu Gly Asp Tyr His Gln Ala
                                     250
                 245
 Leu Lys Thr Val Gln Tyr Val Asp Ile Asp Pro Lys Gly Ile Tyr Asn
             260
                                 265
 Thr Val Pro Thr Cys Leu Val Thr Leu His Tyr Phe Val Gly Phe Ser
                             280
 His Leu Met Met Arg Asn Tyr Gly Glu Ala Thr Lys Met Phe Val Asn
                         295
                                             300
 Cys Leu Leu Tyr Ile Gln Arg Thr Lys Ser Val Gln Asn Gln Gln Pro
                                         315
                     310
 Ser Lys Lys Asn Phe Gln Tyr Asp Val Ile Gly Lys Thr Trp Asp Gln
                                     330
 Leu Phe His Leu Leu Ala Ile Cys Leu Ala Ile Gln Pro Gln Arg Ile
             340
                                 345
 Asp Glu Ser Ile Ala Ser Gln Leu Ser Glu Arg Cys Gly Glu Arg Met
                             360
```

Met His Met Ala Asn Gly Asn Ile Asp Glu Phe Arg Asn Ala Phe Ala

|            | 370        |            |            |            |            | 375        |            |            |            |            | 380        |            |            |            |            |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Thr<br>385 |            | Суѕ        | Pro        | Lys        | Phe<br>390 |            | Ser        | Pro        | Thr        | Thr<br>395 | Val        | Val        | Tyr        | Glu        | Gly<br>400 |
|            | Asn        | Gln        | Ser        | Lys<br>405 | Glu        | Pro        | Leu        | Leu        | Arg<br>410 | Gln        | Thr        | Gln        | Ser        | Phe<br>415 | Leu        |
| Glu        | Gly        | Ile        | Glu<br>420 | Ser        | Gln        | Met        | Ala        | Leu<br>425 | Pro        | Val        | Leu        | Arg        | Gly<br>430 | Tyr        | Leu        |
| Lys        | Leu        | Tyr<br>435 | Thr        | Thr        | Leu        | Pro        | Thr<br>440 | Lys        | Lys        | Leu        | Ala        | Ser<br>445 | Phe        | Met        | Asp        |
| Val        | Asp<br>450 | Asp        | Glu        | His        | Tyr        | Asp<br>455 | Ser        | Phe        | Ile        | Gly        | Lys<br>460 | Leu        | Leu        | Thr        | Tyr        |
| 465        |            |            | Val        |            | 470        |            |            |            |            | 475        |            |            |            |            | 480        |
|            |            |            | Glu        | 485        |            |            |            |            | 490        |            |            |            |            | 495        |            |
|            |            |            | Ile<br>500 |            |            |            |            | 505        |            |            |            |            | 510        |            |            |
|            |            | 515        | Arg        |            |            |            | 520        |            |            |            |            | 525        |            |            |            |
|            | 530        |            | Val        |            |            | 535        |            |            |            |            | 540        |            |            |            |            |
| 545        |            |            | Lys        |            | 550        |            |            |            |            | 555        |            |            |            |            | 560        |
|            |            |            | Thr        | 565        |            |            |            |            | 570        |            |            |            |            | 575        |            |
|            |            |            | Ile<br>580 |            |            |            |            | 585        |            |            |            |            | 590        |            |            |
|            |            | 595        | Asp        |            |            |            | 600        |            |            |            |            | . 605      |            |            |            |
|            | 610        |            | Gly        |            |            | 615        |            |            |            |            | 620        |            |            |            |            |
| 625        |            |            | Asp        |            | 630        |            |            |            |            | 635        |            |            |            |            | 640        |
|            |            |            | Asn        | 645        |            |            |            |            | 650        |            |            |            |            | 655        |            |
|            |            |            | Lys<br>660 |            |            |            |            | 665        |            |            |            |            | 670        |            |            |
|            |            | 675        | Met<br>_   |            |            |            | 680        |            |            |            |            | 685        |            |            |            |
|            | 690        |            |            |            |            | 695        |            |            |            |            | 700        |            |            |            | Glu        |
| 705        |            |            | His        |            | 710        |            |            |            |            | 715        |            |            |            |            | 720        |
|            |            |            | Ala        | 725        |            |            |            |            | 730        |            |            |            |            | 735        |            |
|            |            |            | 740        |            |            |            |            | 745        |            |            |            |            | 750        |            | Leu        |
|            |            | 755        | Ser        |            |            |            | 760        |            |            |            |            | 765        |            |            |            |
|            | 770        |            | Ala        |            |            | 775        |            |            |            |            | 780        |            |            |            |            |
| Pro<br>785 | Asp        | Ala        | Pro        | Leu        | Met<br>790 | Pro        | Asp        | Phe        | Phe        | Ile<br>795 | Pro        | Ala        | GIY        | Thr        | Tyr<br>800 |
| Asp        | His        | Lys        | Phe        | Ser<br>805 | Ser        | Gly        | Ala        | Gln        | Ile<br>810 | Gly        | Lys        | Lys        | Asn        | Lys<br>815 | Thr        |
| His        | Glu        | Ala        | Gly<br>820 | Val        | Val        | Glu        | Glu        | Glu<br>825 | Ile        | Lys        | Gln        | Ile        | Phe<br>830 | Thr        | Ser        |

| Ala        | Lys        | Arg<br>835 | Leu        | Leu        | Asn        | Ala        | Asp<br>840 | Ile        | Val        | Lys        | Lys        | Thr<br>845 | Gly        | Phe        | Val        |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Tyr        | Glu<br>850 | Phe        | Leu        | Leu        | Lys        | Asp<br>855 | Pro        | Thr        | Thr        | Lys        | Ser<br>860 | Glu        | Arg        | Ile        | Ile        |
| Thr<br>865 | Leu        | Asp        | Leu        | Lys        | Asn<br>870 | Gly        | Glu        | Gly        | Ala        | Leu<br>875 | Thr        | Asp        | Lys        | Lys        | Ala<br>880 |
| Ser        | Gly        | Lys        | Ala        | Asp<br>885 | Val        | Lys        | Phe        | Thr        | Leu<br>890 | Ala        | Pro        | Glu        | His        | Phe<br>895 | Ala        |
| Pro        | Leu        | Phe        | Thr<br>900 | Gly        | Lys        | Leu        | Arg        | Pro<br>905 | Thr        | Thr        | Ala        | Leu        | Met<br>910 | Thr        | Lys        |
| Lys        | Leu        | Gln<br>915 | Ile        | Ser        | Gly        | Asp        | Met<br>920 | Pro        | Gly        | Ala        | Met        | Lys<br>925 | Leu        | Glu        | Ser        |
| Leu        | Leu<br>930 | Arg        | Lys        | Phe        | Thr        | Glu<br>935 | Gly        | Lys        | Leu        |            |            |            |            |            |            |